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(54) Title: MULTI-COMPONENT VACCINE TO PROTECT AGAINST DISEASE CAUSED BY *HAEMOPHILUS INFLUENZAE* AND *MORAXELLA CATARRHALIS*

(57) Abstract: A multi-valent immunogenic composition confers protection on an immunized host against infection caused by both *Haemophilus influenzae* and *Moraxella catarrhalis*. Such composition comprises at least four antigens comprising at least one antigen from *Haemophilus influenzae*, and at least one antigen from *Moraxella catarrhalis*. Three of the antigens are adhesins. High molecular weight (HMW) proteins and *Haemophilus influenzae* adhesin (Hia) proteins of non-typeable *Haemophilus* and a 200 kDa outer membrane protein of *Moraxella catarrhalis* comprise the adhesin components while the other antigen is a non-proteolytic analog of Hin47 protein. Each component does not impair the immunogenicity of the others. The multi-valent immunogenic composition may be combined with DTP component vaccines, which may also include non-virulent poliovirus and PRP-T, to provide a component vaccine without impairment of the immunogenic properties of the other antigens.

## INTERNATIONAL SEARCH REPORT

National Application No

PCT/CA 00/00811

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K39/116 A61P31/04 //(A61K39/116,39:104,39:102)

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BIOSIS, MEDLINE, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 34960 A (CONNAUGHT LABORATORIES LIMITED) 7 November 1996 (1996-11-07) cited in the application the whole document	1-29
A	BARENKAMP S J ET AL: "IDENTIFICATION OF A SECOND FAMILY OF HIGH-MOLECULAR-WEIGHT ADHESIONPROTEINS EXPRESSED BY NON-TYPABLE HAEMOPHILUS INFLUENZAE" MICROBIOLOGICAL SCIENCES, BLACKWELL SCIENTIFIC PUBLICATIONS, EDINBURGH, GB, vol. 19, no. 6, 1996, pages 1215-1223, XP000946619 ISSN: 0265-1351 cited in the application the whole document -/-	1-29

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Information on patent family members

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